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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,952

04/17/2006

David Cressey

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03/09/2010

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EXAMINER

OLADAPO, TAIWO

ART UNIT

PAPER NUMBER

1797

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/542,952	<b>Applicant(s)</b> CRESSEY ET AL.	
	<b>Examiner</b> TAIWO OLADAPO	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 23, 25-34 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 23, 25-34 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The amendment dated 12/17/2009 has been considered and entered for the record. The arguments are not persuasive, however new grounds of rejection are made in view of amendment.

#### ***Claim Objections***

2. Claim 23 is objected to because of the following informalities: The claims are not in compliance with 37 CFR 1.121(c)(4)(i) which requires that no claim text shall be presented for any claim in a claim listing with the status of cancelled. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 26 recites the limitation "(a)(ii)(3)" in claim 1. Claim 27 recites the limitation "(a)(ii)(4)" in claim 1. There is insufficient antecedent basis for those limitations in the claim, since claim 1 has been amended to delete the limitations.

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***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1 – 5, 25 – 34, 37, are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (WO 01/56968) in view of Hoke (US 4,090,971).

10. In regards to claim 1, Taylor teaches additives comprising salicylic calixarenes which are salixarates formed from the reaction product of structures (Ia) and (Ib) (abstract). Taylor teaches

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compound (Ia) wherein  $R^5$  can be hydroxyl, and  $j$  is 1 or 2 which meets the limitations of compounds (I) and (III) in the claim when  $U$  is hydroxyl and  $R^3$  is hydrogen,  $R^2$  is hydroxyl and  $j$  is 1; compound (Ib) wherein  $R^1$ ,  $R^2$ ,  $R^4$  can each be hydroxyl, and  $R^3$  can be hydrocarbyl which meets the limitations of formula (II) of the claim when  $R^4$  is hydrocarbyl,  $g$  is 1 and  $f$  is 3. Since the claim requires that the salicylic compound comprise one or more of the compounds (I) to (IV), Taylor meets the limitation of 1(a)(i)/ 21(a)(i) of the claims.

Taylor teaches use of the salixarate compounds or their metal salts in lubricating oils which meets the limitations of (b) of the claim (column 20 lines 26 – 31). The reaction product is a sulfur free reaction product according to limitation (a) of the claim. Taylor does not teach reacting the salicylic compounds with an amine according to the limitations in 1(a)(ii)/21(a)(ii).

Hoke teaches substituted salicylamides useful as dispersants in lubricants or fuels (abstract). Hoke teaches the salicylamides can be prepared from salicylic acids or derivatives which are reacted with monoamines, polyamines or nitrogen compounds such as aliphatic, aromatic, heterocyclic and carboxylic amines including compounds like imidazoles which are nitrogen heterocycles and hydroxy substituted polyamines which meets the limitations 1(a)(ii)(5), (6),(8) (column 2 line 51 – column 3 line 64; column 4 line 63 – column 5 line 10) .

It would have been obvious for one of ordinary skill in the art at the time of the invention to have used the salixarate of Taylor to prepare salicylamides according to the teaching of Hoke, as Hoke teaches they are useful as dispersants in lubricating oils. Such dispersants would have been suitable for use in the invention of Taylor which teaches that the lubricant composition can comprise other additives such as dispersants

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11. In regards to claim 2, Taylor and Hoke combined teach the lubricant composition comprising dispersants as previously stated.

12. In regards to claim 3, Taylor and Hoke combined teach the composition. Hoke teaches the lubricant can comprise about 0.05 to 20% of the salicylamide reaction product (column 12 lines 11 – 19) and the lubricating oil can comprise about 90% which meets the claim (column 15 lines 25 – 42).

13. In regards to claims 4, 5, Taylor and Hoke teach the composition. Hoke teaches the reaction products could be further post-treated with sulfur (column 6 lines 25 – 34). The post treatment of the products is optional and is therefore not required in the invention of Hoke. Hoke teaches that the products can comprise extreme pressure additives which are either sulfur based or non sulfur based (column 14 lines 11 – 37). Taylor does not require sulfurized compositions. Therefore, sulfur free lubricants are within the scope of the combined invention. Hoke teaches the composition can comprise ashless detergents and dispersants (column 12 lines 22 – 23). Therefore, the lubricating oil can be free of sulfated ash. Neither Taylor nor Hoke requires phosphorus based additives; therefore the lubricant of the combined invention can be sulfur free.

14. In regards to claims 25, Taylor and Hoke combined teach the composition. Hoke teaches amides of carboxylic acids containing alkyl substituted hydroxyl aromatic groups as in the invention of Habeeb (abstract). Hoke teaches that the amides can be prepared from compounds which react with the carboxylic acids, such as, guanidines (column 2 lines 65 – 68).

15. In regards to claim 26, Taylor and Hoke combined teach the composition, wherein component (a)(ii) are primary monoamines as previously stated.

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16. In regards to claim 27, Taylor and Hoke combined teach the composition, wherein the component (a)(ii) is a polyamine having ethylene diamine, or ethylene polyamines, i.e. triethylene tetramine (Hoke, column 4 lines 8 – 42).

17. In regards to claim 28, Taylor and Hoke combined teach the composition, wherein the component (a)(ii) are pyrroles, piperidines, pyridines etc (Hoke, column 3 lines 64 – 68).

18. In regards to claims 29, 30, Taylor and Hoke combined teach the composition, wherein the component (a)(ii) is i.e. ethanol amine which are primary aminoalcohols having 1 hydroxyl group and 2 carbons (Hoke, column 3 lines 47 – 55).

19. In regards to claims 31, 33, Taylor and Hoke combined teach the composition comprising the reaction product which can comprises metal or be metal free as previously stated.

20. In regards to claims 32, 37, Taylor and Hoke combined teach the composition which is prepared by reacting components Ia and Ib (equivalent to a(i) and a(ii) of the claim) under heating conditions to form a product to be added to a lubricating oil composition thus meeting the limitations of (a) and (c) of claim 32 (Taylor, Page 10 lines 24 – 27). Taylor teaches that the product may be neutralized to form a salt thus meeting the limitation of claim 37 (page 10 lines 28 – 31)

21. In regards to claim 34, Taylor and Hoke combined teach the composition which is suitable for lubricating internal combustion engines such as diesel engines, thus providing for the method of lubricating the engine by supplying the engine with the composition of claim 1 which intrinsically performs the desired functions (Taylor, Page 1 lines 1 – 6).

***Response to Arguments***

22. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

23. The claims have been amended to exclude (a)(ii)(3)/(4) from claim 1. Applicants assert that since no rejection was made over groups 1(a)(ii)(1),(2),(5),(6),(7), and (8) in the previous office action dated 09/15/2009 those groups are unobvious over Taylor in view of Hoke. In view of amendment requiring one of groups (a)(ii)(1),(2),(5),(6),(7), and (8) in claim 1, new rejections are made over Taylor in view of Hoke particularly pointing out teachings of groups (a)(ii) )(5), (6),(8) as discussed in §11above. Therefore the argument is moot.

***Conclusion***

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TO

/Ellen M McAvoy/  
Primary Examiner, Art Unit 1797